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**RE: 1407 Lakeshore Rd E Mississauga -
Shadow Study Justification**

April 4, 2022

Shadow Studies have been conducted for this project located at 43°35'8.78886"N 79°33'1.05442"W as derived from Google Maps geolocation of property boundaries.

Astronomical North is through the geo locate function in Sketchup, determined by Digital Globe Satellite Imagery and with Google Maps.

Base plan from Survey; surrounding context derived from Google Maps.

As the project is still within preliminary design stages, this shadow study will serve to demonstrate general findings, which will be refined throughout design development. We do not anticipate any major changes in the building height, location, or massing that may affect the shadow impacts.

Detailed description and assessment as follows (section numbers correspond to *Mississauga's Urban Design Terms of Reference - Standards for Shadow Studies June 2014*):

The shadow study finds that the incremental shadows do not represent of undue impacts on amenity or surrounding areas.

3.1 Criteria: Residential Private Outdoor Amenity Spaces

Shadow impacts from proposed development does not exceed one hour in duration on areas such as private rear yards, decks, patios and pools of surrounding residential dwellings on each of the following dates: June 21st, September 21st. The criteria is met if there is shadow impact for no more than two consecutive hourly test times within the space between the exterior wall of the dwelling that abuts the amenity space and the line of impact assessment ("No Impact Zone").

Assessment:

The shadow impact to the properties along Cherriebell road & Deta Road occurs from sunrise until approximately 10.20am in June. The shadow impact to the properties along Cherriebell road & Deta Road occurs from sunrise until approximately 12.12am in September. There are no Residential Private Outdoor Amenity Spaces from adjacent developments on Lakeshore Road East affected by the proposed development.

There is shadow impact on part of the proposed residential private outdoor amenity on June 21. The shadow completely clears the outdoor amenity at approximately 10:20am until 5:20pm, and therefore provides full sun for at least half the time, most of the day or at least 50% sun coverage.

There is shadow impact on part of the proposed residential private outdoor amenity on September 21. The shadow completely clears the outdoor amenity at approximately 10:12am until 5:12pm, and therefore provides full sun for at least half the time, most of the day or at least 50% sun coverage.

3.2 Criteria: Communal Outdoor Amenity Areas

Shadow impacts from proposed development should allow for full sun on areas such as children's play areas, school yards, tot lots, park features such as sandboxes and wading pools, outdoor amenity areas used by seniors and those associated with commercial and employment areas at least half the time, or 50% sun coverage all the time, on each of the following dates: June 21st, September 21st, December 21st. The criteria is met if the "sun access factor" is at least 50% or 0.5 on each of the test dates ($As(ave)/AT = 0.5$ or more)

Assessment:



Criteria is met for existing Communal Outdoor Amenity Areas. There are no Communal Outdoor Amenity Areas affected by the proposed development.

3.3 Criteria: Public Realm

Mixed Use, Commercial, Employment and High-Density Residential Streets

Developments should be designed to allow full sunlight on the opposite boulevard including the full width of the sidewalk on September 21st for a total of at least 5 hours that must include the 2 hour period between 12:12pm and 2:12pm and an additional 2 hour period from either 9:12am to 11:12am or from 3:12pm to 5:12pm.

Low and Medium Density Streets

Developments should be designed to allow full sunlight on the opposite boulevard including the full width of the sidewalk on September 21st for a total of at least 4 hours between 9:12am and 11:12am and between 3:12pm and 5:12pm.

Public Open Spaces, Parks and Plazas

Developments should be designed to provide a sun access factor of at least 50% on public open spaces, parks and plazas on September 21st.

Assessment:

Mixed Use, Commercial, Employment and High Density Residential Streets

Criteria is met for Mixed Use, Commercial, Employment and High Density Residential Streets (Lakeshore Road East). Full sunlight is on the opposite boulevard including the full width of the sidewalk during the above required hours.

Low and Medium Density Streets

There is a slight shadow impact for Low and Medium Density Residential Streets (Cherriebell Road). Full sunlight is on low and medium density streets including the full width of the sidewalk at 10:12 onwards.

Public Open Spaces, Parks and Plazas

Criteria is met for Public Open Spaces, Parks, and Plazas.

3.4 Criteria: Turf and Flower Gardens in Public Parks

Proposed developments should allow for a minimum of 6 hours of direct sunlight on September 21st. Criteria is met if full sun is provided on any 7 test times on September 21, from 1.5 hours after sunrise to 1.5 hours before sunset.

Assessment:

Criteria are met for existing Public Parks. No new Public Parks are proposed.

3.5 Criteria: Building Faces to Allow for the Possibility of Using Solar Energy

Shadow impacts from proposed developments should not exceed one hour in duration on roofs, front, rear, and exterior side walls of adjacent lower rise (one to four storeys) residential buildings on September 21st. Criteria is met if there is shadow impact for no more than two consecutive hourly test times in the "No Impact



Zone” i.e. the space between the front, rear and exterior side walls of the adjacent low rise residential buildings and the respective lines of impact assessment.

Assessment:

The shadow impact to the properties along Cherriebell road & Deta Road occurs from sunrise until approximately 10.20am in June. The shadow impact to the properties along Cherriebell road & Deta Road occurs from sunrise until approximately 12.12am in September.

Yours Sincerely,

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